# Meeting the Challenge of Diversity:
## Professional Development for Teacher Educators

**By Susan O'Hara & Robert H. Pritchard**

According to recent demographic data, over 1.5 million English learners (EL) attend public and private schools in California. This number is expected to exceed two million by 2015 (California Department of Education, 2002), thus greatly increasing the number of students in need of language and literacy development in English. The situation is similar in many other states where changing immigration patterns have brought native speakers of other languages to schools in growing numbers. In fact, half of all teachers nationally may expect to have a culturally and linguistically diverse (CLD) student in their classroom at some point in their career (Menken & Antunez, 2001). Consequently, the provision of English language and subject matter instruction to English learners is one of the most critical challenges confronting teachers and teacher educators today.

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While the number of English learners enrolled in K-12 schools continues to grow dramatically, only a fraction of those students are in bilingual or ESL classrooms. Thus, the majority of English learners receive most, if not all, of their instruction from regular classroom teachers. Tragically, most teachers in these classrooms have little or no training in the learning needs of CLD students (AACTE, 2002).

In response to this disparity, some educators have advocated for increased preparation for mainstream teachers to work with culturally and linguistically diverse student populations (Darling-Hammond, 1999; Fillmore & Snow, 2000; Gandara & Maxwell-Jolly, 2002; Garcia, 1996; Haberman, 1996; Vavrus, 2002; Zeichner, 1996). In addition, research studies have investigated the ways in which teacher preparation programs attempt to address this issue (Gandara & Maxwell-Jolly, 2002; Haberman, 1996; Vavrus, 2002; Zeichner, 1996). One recurrent suggestion from recent studies is the necessity to provide all teacher candidates with specific content and pedagogical knowledge related to working with CLD populations (Clair & Adger, 1999; Gandara & Maxwell-Jolly, 2002; Fillmore & Snow, 2000; Gonzalez and & Darling-Hammond, 1997; Olmedo, 1997; Zeichner, 1996) as well as with multiple opportunities to apply this knowledge to classroom practice (Gandara & Maxwell-Jolly, 2002; Zeichner, 1996). Research results also indicate that successful teacher preparation programs integrate issues of cultural and linguistic diversity into all courses and field experiences (Olmedo, 1997; Rueda, 1998; Zeichner & Melnick, 1996), and that methods faculty, university supervisors and cooperating teachers all need to participate meaningfully in this integration process (Gandara & Maxwell-Jolly, 2002; Zeichner, 1996).

In an article titled, "What Teachers Need to Know about Language," Fillmore and Snow (2000) assert that teachers need an understanding of how language impacts teaching and learning. They suggest the following course components for teachers to learn content knowledge about language: language and linguistics, language and cultural diversity, sociolinguistics for educators in a linguistically diverse society, language development, second language teaching and learning, the language of academic discourse, and text analysis in educational settings.

A national study of teacher education preparation for diverse student populations was conducted in 2002 and published by the Center for Research on Education, Diversity and Excellence (CREDE). The authors of this study (Walton, Baca, & Escamilla, 2002) made the following recommendations for teacher preparation programs, which are consistent with those of Fillmore, Snow and others:

> All teachers should be prepared to address the social, cultural, linguistic and economic backgrounds of the entire spectrum of American students.
>
> All teacher preparation programs should include in their curricula study of the nature of language development and first and second language acquisition and dialect.
>
> All teachers need to develop an understanding of the diverse cultural patterns and the historical impact of diverse populations on the development of the U.S. This understanding needs to be infused across courses in the teacher education programs.
>
> All teachers need to learn teaching methodologies that are specially designed to teach English Language Learners and dialect speakers. Methodologies should include methods that provide access to academic content in English, as well as access to learning the language.

> Literacy development in L1 or L2 — critical to improvement of student achievement in all states, yet not a prominent feature of case study sites. More attention needs to be paid to literacy issues, new courses developed, etc.
>
> That teacher trainers and their colleagues in higher education engage in sustained and ongoing professional development related to preparing teachers for the linguistic and cultural diversity of America's schools. (Walton, Baca, & Escamilla, 2002)

Thus, a central component of any successful teacher preparation program is faculty regularly modeling best practices with respect to instructional strategies for working with a diverse student population. For this to occur, teacher educators need to engage in ongoing professional development and have ongoing access to appropriate resources and supports (Darling-Hammond & McLaughlin, 1995; Vavrus, 2002). A Call to Action report produced by the Committee for Multicultural Education, a committee of the American Association of Colleges of Teacher Education (AACTE, 2002), stressed the need for faculty professional development addressing cultural and linguistic diversity.

> Ultimately, institutions of higher education must demonstrate critical reflexivity regarding the readiness of their faculties to achieve these benchmarks of teacher preparation and professional development for diversity. Prior socialization is as much an issue for collegiate faculty as it is for grade-level classroom teachers. It requires the capacity to influence perspectives on preparation, attitudes toward the accommodation of diversity, and actions in practice. Accordingly, cross-culturally sensitive professional development and accommodation training are each equally as applicable to college faculty members as they are to public school educators. (p. 7)

The need for this training in California has been heightened by state legislation (Senate Bill 2042) that requires many elements related to teaching CLD students to be embedded in all programs leading to a basic teaching credential rather than being a post-credential requirement. This is now known as the English Learner Authorization, and every accredited teacher education program in California must demonstrate that it provides this special preparation within the context of its basic elementary and secondary credential programs.

The mandatory nature of the SB2042 elements has put additional burdens on individual faculty and teacher education programs. Since these elements must now be infused throughout credential programs (rather than isolated in one or two courses), programs can no longer operate with just a few faculty members skilled in these areas. Because all faculty members now share these responsibilities, all faculty members must have (or develop) the requisite knowledge, skills and dispositions to address the SB2042 guidelines.

This study reports the results of a professional development program for teacher education faculty at a California State University campus. The program was designed to prepare faculty to offer the new courses developed for its SB2042

credential programs with particular emphasis on standards related to English learners (13), special populations (14) and technology (9).

## The Professional Development Program

During the summer and fall of 2002 faculty members in the Teacher Education Department began the process of revising their elementary and secondary teacher preparation programs to meet the standards set forth in SB2042. The major theme of the legislation is that we must prepare teachers who know how and are disposed to teach *all* children in California, that we must provide consistent and compelling evidence of our capacity to prepare such teachers, and that we must achieve this goal with maximum efficiency and reliability.

During the revision of our programs faculty created a list of design principles based in part on research about effective models for preparing teachers. These design principles reflected a belief held by faculty that, in addition to creating a number of stand-alone courses to address elements of the SB2042 standards, elements of these standards would need to be infused across all the course work and field experiences within our programs. This approach allows candidates to see effective methods and instructional strategies modeled throughout their program, both in coursework and in the field. In addition, it was decided that candidates need quality site-based field experiences that are closely aligned with methods courses affording them multiple opportunities to put theory into practice and to reflect on that practice. These site-based field opportunities would be in addition to a two semester, student teaching experience.

At a day-long retreat in January 2003 faculty collectively developed matrices which showed where elements of these standards would be met within the courses and field experiences embedded in both our elementary and secondary programs. The standard 13 matrix for the elementary program is provided as an example in table 1. The inclusive and collaborative process that faculty embarked on in making these choices allowed everyone to take ownership and responsibility for preparing candidates to work with all populations.

Having designed the new programs, the next challenge was to develop a plan whereby necessary professional development could occur so that all faculty in the department were well prepared to offer the courses and field experiences outlined in the proposed programs. A professional development committee consisting of faculty with expertise in the infusion areas designed a plan that allowed time and opportunity for participants to increase both their content and pedagogy knowledge in a comfortable setting over time. The following principles guided the development of our professional development program:

> Session activities should be interactive, collaborative and encourage participants to be knowledge constructors rather than mere recipients of information.

Table 1. S.B.2042 Standard 13—Multiple Subject Program.

| Stand. 13 | Brief Descp. | ED BM | Found | Ped A/B | L&L | Math | Sci | SS | Art | Stud. Teach. | E Portfolio |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13(a) | School based organiz. structure | Intro | Expand | | Expand | | | | | | Evidence |
| | Relation. to reading/ lan. arts standards | | | | Intro | | | | | | Evidence |
| 13(b) | Underst. Materials for ELD | | | | Intro | Expand | Expand | Expand | | | Evidence |
| | Underst. methods for ELD | | | | Intro | Expand | Expand | Expand | | | Evidence |
| | Underst. strategies for ELD | | | | Intro | Expand | Expand | Expand | | | Evidence |
| | Use materials, methods, & strategies for ELD | | | | Intro/ Apply | Expand | Expand | Expand | | Apply | Evidence |
| 13(c) | State and federal laws, how they impact student placements | Intro | Expand | | | | | | | | Evidence |
| | State and federal laws, how they impact instruct. programs | Intro | Expand | | | | | | | | Evidence |
| 13(d) | Linguistic develop. | Intro | | | Expand/ Apply | | | | | | Evidence |
| | L1/L2 acquis. | Intro | | | Expand/ Apply | | | | | | Evidence |
| | L1 liter. connects to L2 develop. | Intro | | | Expand/ Apply | | | | | | Evidence |
| 13(e) | Coursew. instruct. 1 pract. for ELD | Intro | | Expand | Expand | Expand | Expand | Expand | | | Evidence |
| | Fieldw: instruct. 1 pract. for ELD | | | | Apply | Apply | Apply | Apply | Apply | Apply | Evidence |
| 13(f) | Coursew. instruct. 1 strateg. | | | Intro | Expand | Expand | Expand | Expand | | | Evidence |
| | Fieldw. instruct. 1 strageg. | | | | Apply | Apply | Apply | Apply | Apply | Apply | Evidence |

Table continued on next page

Table 1. S.B.2042 Standard 13—Multiple Subject Program (continued).

| Stand. 13 | Brief Descp. | ED BM | Found | Ped A/B | L&L | Math | Sci | SS | Art | Stud. Teach. | E Portfolio |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13(g) | How to interpret assess. of ELs | Intro | | | Expand | | | | | | Evidence |
| | CELDT | Intro | | | Expand/ Apply | | | | | | Evidence |
| | CA ELD Stands. | Intro | | | Expand | | | | | | Evidence |
| | Use appro. measures for lang. develop. | | | | Intro/ Apply | | | | | Apply | Evidence |
| | Use appro. measures for cont. know. in core curr. | | | | Intro/ Apply | Intro/ Apply | Intro/ Apply | Intro/ Apply | | Apply | Evidence |
| 13(h) | Learn and understand import. of students' family backgr. & exp. | Intro | Expand/ Apply | | | | | | | | Evidence |

Session activities should be structured such that faculty have opportunities to connect new information to the courses they teach.

Faculty who work in the field should be teamed with methods faculty during curriculum development activities.

There should be multiple opportunities for peer sharing of knowledge and practical examples.

Online assignments should be designed to connect the face-to-face sessions together and to foster critical reflection.

The first phase of this program consisted of face-to-face meetings that were held over the spring semester. During this phase faculty experienced professional development activities designed around the core knowledge, skills and dispositions necessary to successfully infuse elements of the SB2042 standards 9, 13, and 14 into the curriculum. Between each of the face-to-face sessions faculty participated in online collaborations and communications through a web-based resource center. This provided access to online tutorials, resources, and articles. Faculty participated in online threaded discussions, accessed web-based articles, audio clips, and video, and created multimedia presentations, all related to the activities and content from the face-to-face sessions. Thus, technology skills were enhanced as faculty used different technologies for specific activities tied to the other professional development areas.

The professional development activities and presentations focused on a set of knowledge, skills, and dispositions necessary to prepare candidates to teach all students, with a major focus on CLD populations. The committee decided on a common core that all faculty need to acquire in order to prepare candidates to work with CLD populations, based on the research about preparing teachers to work with these populations (Clair & Adger, 1999; Fillmore & Snow, 2002). The areas which were included in this core were: immigration trends and demographics, legal foundations, the role of the first language and culture in learning, linguistics, L1 and L2 acquisition theory, instructional practices, strategies and methods for English language development, and providing all students with access to the core curriculum.

This phase of the professional development began with an all-day retreat in February 2003 where presentations and activities focused on immigration trends, national and state demographics, an overview of legal foundations, and the role of culture in learning. Faculty members engaged in interactive activities and discussions around these areas. One purpose of this day was to articulate the growing need for all teachers to be prepared to teach CLD student populations. A second purpose was to discuss the impact of students' cultural background on their learning, specifically language learning. The committee believed that it was important to begin this professional development program with a focus on what cultural and life experiences students bring to the classroom and how this shapes their subsequent learning experiences. Finally, this day long retreat set the stage for the professional development sessions that would follow by frontloading content, creating a sense of community, and promoting team building.

A series of two-hour meetings was held over the spring semester. One goal for these sessions was to provide faculty with a body of knowledge about linguistics, first and second language acquisition theories, English language development, and the assessment of English learners. A second goal was to provide faculty with facilitated opportunities to develop course outcomes and assignments for teacher education candidates around these topics.

These sessions began with a presentation on the focus topic, e.g., language acquisition. These presentations were followed by interactive activities where faculty worked in groups and answered guided questions related to the focus topic of that session. For instance, the language acquisition session include a videotaped portion of a NOVA special called "Baby Talk" which presented different perspectives regarding the language acquisition process. The group activity was an anticipation guide based on the videotape.

During some of these sessions faculty members participated in professional development activities within their specific program area groups (elementary and secondary programs). Activities were designed so faculty had the opportunity to work both within specific content area groups (e.g., math, science, literacy) and mixed groups. All presentations were made available to faculty after each session through the web-based resource center. In addition, faculty members were as-

signed articles to read and short video clips to watch which helped to connect the content of one session to the next. Faculty interactions and participation in these activities made us confident that most faculty members had read the material and were prepared for the session. These activities were also made available through the web-based resource center for anyone wishing to review the material.

The professional development ended with a day-long retreat focusing on providing all students with access to the core curriculum. The professional development committee collaborated with faculty in the Department of Special Education, Rehabilitation, and School Psychology to plan the activities for this day. Using the Sheltered Instruction Observation Protocol (SIOP) (Echevarria, Vogt, & Short, 2000) as a model, teacher education and special education faculty teamed up to present methods and instructional strategies designed to make grade appropriate or advanced curriculum comprehensible to CLD and special education populations. Once again participants worked in content specific groups to connect the content from the morning presentations to their work with teacher candidates.

During the next academic year faculty worked individually and in small groups to fully develop syllabi for the courses that comprise our new elementary and secondary credential programs. In addition, faculty piloted instructional activities from the new courses, and collaborated with our K-12 partners to design the fieldwork experiences that were built into each methods course. As faculty proceeded through this process they were coached and mentored by assigned faculty with expertise in the infusion areas. This process allowed faculty to design, implement, and reflect on curriculum that met the standard elements for their specific content area and provided support they needed to succeed.

## Achieving Faculty Buy-in for the Professional Development Program

As anyone who has worked with university faculty knows, achieving consensus, much less unanimity, on any given issue can be a Herculean task. In a department with forty-five probationary and tenured faculty and approximately thirty part-timers, this challenge is even greater. Nonetheless, the professional development program did proceed with an amazing degree of consensus and an equally amazing lack of dissension. A number of factors contributed to this success.

First, the Department Chair worked with the Dean of the College of Education and administrators in Faculty and Staff Affairs (FSA) to determine how much leverage he had with faculty who might object to participating in the professional development program. The Chair was told that at this university assignment of workload has always been a chair's purview and, as long as the Dean supported him, he could require that faculty attend. If faculty refused, the Chair had the authority to reassign faculty to teach courses outside of the credential programs.

The Chair's next step involved working to create a common vision among faculty

that would increase the likelihood of securing faculty participation without having to use (or even threatening to use) the leverage FSA and the Dean had given him. This process was easier than one might expect because (1) it was relatively easy to predict which faculty members might object and they numbered fewer than five, (2) fifteen new faculty members had been hired during the two years immediately preceding development of the SB2042 program and they brought fresh perspectives and enthusiasm to the task of building new programs, and (3) the members of the leadership team that planned the professional development program were widely respected by their peers. The Chair then met with individual faculty members who he thought might not want to attend, explained why he believed it was important for everyone to participate, and discussed the ramifications of refusing. In the end all but one agreed, and since that person had been seeking to reenter the credential program after a number of years on other assignments, the person simply continued to work in other programs.

A very pragmatic factor that contributed to faculty willingness to participate in the professional development program is that most of the sessions were arranged during already scheduled meetings and retreats. The content of the professional development program simply became the primary agenda item for those meetings. Contrary to what one might expect, this approach did not significantly interfere with the "regular" business of the department. In fact, it helped us become more efficient.

For example, our department had always had two faculty meetings a month. When the professional development program was instituted, we agreed that we would meet as a department only once a month so that the other regularly scheduled day could be devoted to professional development. Despite the reduction of time devoted to other department business, we did manage to accomplish everything that needed to be done in the reduced time. Consequently, two years after the completion of the professional development program, we still maintain the once a month department meeting schedule.

Although it is important to acknowledge that getting all faculty members to willingly participate was a concern and that the steps described above were instrumental in securing their cooperation, it is equally important to understand that most faculty members approached the process of developing and implementing new programs with very positive attitudes. When it became obvious that faculty members had different amounts of academic preparation and professional experience related to some areas of our new programs, e.g., issues related to English learners, most faculty members willingly (if not enthusiastically) embraced the opportunity to participate and learn from their colleagues.

## Curricular Changes Resulting from the Professional Development Program

As a result of our professional development model, the multiple and single

subject teacher preparation programs in our department have been re-designed to offer candidates ample opportunities to gain the knowledge, skills and dispositions that are needed to become an effective classroom teachers working with English language learners. These changes are evident in the following ways:

Faculty members renamed each of the courses in the program to emphasize work with diverse populations and reflect substantive changes in course content. For example, "Curriculum and Instruction in Elementary School Mathematics" became "Mathematics Curriculum and Instruction for the Diverse K-8 Classroom."

Faculty members designed signature assignments for each course and required that each candidate pass the signature assignment in order to pass the course. These signatures assignments were designed to include specific activities with EL students. The following principles guided the design of the signature assignments and corresponding assessment rubrics:

(1) Clearly articulated learning outcomes from the assignment aligned with the Teacher Performance Expectations (TPEs).

(2) Clearly articulated knowledge base candidates need in order to complete the assignment with full understanding.

(3) Clearly articulated key activities and field experiences candidates need for the assignment.

(4) Clearly articulated rubric criteria applied to the assignment to assess learning outcomes and determine levels of quality of work.

The following is an example of a signature assignment:

Effective classroom teachers need to be able to modify existing curriculum to meet the diverse needs of all students in their classroom. In this signature assignment candidates will implement a weeklong instructional sequence in which modifications are made to the classroom curriculum. Modifications should include SDAIE and other strategies that meet the needs of the diverse group of students in the candidate's classroom, including English language learners and special needs populations. Grade level and topic will be determined by the individual candidate. After implementation candidates will write a reflection on the instructional sequence.

Multiple Subject faculty members designed field experiences attached to each methods course in the program to provide candidates with opportunities to work with students, focusing on the specific content areas. Candidates are required to document work with EL students as part of these field experiences. An additional unit hour for students and a corresponding weighted teaching unit for faculty were added to each methods course to accommodate this new fieldwork requirement.

The Student Teaching Observation form used to evaluate candidates during their student teaching was re-designed and modeled after the Sheltered Instruction Observation Protocol.

These changes mean that there are multiple measures embedded across the programs to assess each candidate's ability to effectively work with diverse populations. The work candidates complete is part of a required professional e-portfolio consisting of artifacts, evidence, and reflections documenting candidates' growth as teachers and demonstrating that they have met the state mandated standards, including those related to teaching EL students. The evaluation of this electronic portfolio system is conducted periodically at CSUS in order to improve the implementation of the new program and to identify any challenges.

## Methodology and Data Collection

An instrument used in previous studies (Pritchard & Monroe, 2002) was modified for use in this investigation (See Appendix A). It was designed to measure participants' self-report of their knowledge and use of information related to the relevant elements of standards 9, 13 and 14. The instrument served as a pre and post measure, and provided evidence of change of knowledge and use as a result of the program. The instrument was administered to all participants at the outset of the first day and again at the conclusion of the final day. Thirty-eight subjects completed both the pre and post surveys.

### *Data Analysis and Findings*

We organized the survey data in multiple ways. First, the pre and post mean knowledge and use for standards 9, 13, and 14 were calculated and examined. A series of t-tests was then performed to compare the pre-post reported scores. We used a Bonferroni correction to correct for multiple comparisons, and so we looked for statistical significance at the .003 level. There was a statistically significant mean increase in knowledge and use within each standard. Table 2 shows the pre and post mean scores and standard deviations for each standard split by Knowledge and Use, and the t-values for the pre-post comparisons.

On average, faculty came into the professional development program reporting a moderate level of knowledge (3 on the survey) about preparing candidates to work

Table 2. Pre-Post Standard Analysis by Knowledge and Use.

| | Standard 9 (tech) | | | Standard 13 (CLD) | | Standard 14 (EDS) | |
|---|---|---|---|---|---|---|---|
| | Pre (SD) | Post (SD) | t-value | Pre (SD) | Post t-value (SD) | Pre (SD) | Post t-value (SD) |
| Know | 2.84 | 3.51 | *5.35 | 3.23 | 3.92 *7.47 | 3.16 | 3.71 *4.91 |
| N=38 | (1.34) | (1.00) | | (0.87) | (0.67) | (0.72) | (0.62) |
| Use | 2.39 | 3.20 | *5.98 | 2.94 | 3.68 *6.21 | 2.92 | 3.55 *5.19 |
| N=38 | (1.27 | (1.10) | | (0.89) | (0.67) | (0.75 | (0.65) |

with technology, CLD and EDS populations. Faculty reported only some use (2 on the survey) of technology and moderate use of components related to preparing candidates to work with CLD and EDS populations. In all of these areas, faculty reported greater knowledge than use. The least knowledge and use was reported in the area of technology and the most knowledge and use in the area of preparing candidates to work with CLD populations. The post program data show that on average participants reported a moderately high knowledge (4 on the survey) in all areas. Post data also show that participants reported a moderate use (3 on the survey) of technology and a moderately high use of components related to preparing candidates to work with CLD and EDS populations.

Table 3. Pre-Post Element Analysis Split by Knowledge and Use.

| | | Pre Mean (SD) | Post Mean (SD) | t (38) |
|---|---|---|---|---|
| | | *Standard 13* | | |
| Know | EL state & federal laws | 2.74 (1.10) | 3.80 (.89) | *6.10 |
| Use | | 2.40 (1.20) | 3.29 (.92) | *5.97 |
| Know | Linguistics/L1/L2 acquis. | 3.18 (1.18) | 4.03 (.95) | *6.07 |
| Use | | 2.82 (1.20) | 3.7 (1.00) | *4.67 |
| Know | Inst. practices promote ELD | 3.45 (.93) | 3.97 (.80) | *4.47 |
| Use | | 3.29 (1.11) | 3.92 (.80) | *3.90 |
| Know | Curr. compreh. to ELs | 3.29 (1.01) | 3.97 (.80) | *5.21 |
| Use | | 3.11 (1.01) | 3.84 (.85) | *4.40 |
| Know | EL assessment | 2.82 (1.18) | 3.47 (1.01) | *3.34 |
| Use | | 2.26 (1.20) | 3.05 (1.08) | *3.58 |
| Know | Cultural background | 4.08 | 4.39 | not sig. |
| Use | | 3.92 | 4.12 | not sig. |
| | | *Standard 9* | | |
| Know | Legal/ethical technology | 2.95 (1.36) | 3.61 (1.10) | *4.32 |
| Use | | 2.51 | 2.80 | not. sig. |
| Know | Tech. for info. coll. & anal. | 2.95 (1.40) | 3.53 (1.10) | *3.88 |
| Use | | 2.55 (1.35) | 3.34 (1.11) | *5.20 |
| Know | Select effect. tech to | 2.68 (1.42) | 3.42 (1.11) | *5.09 |
| Use | infuse in curr. | 2.21 (1.32) | 3.16 (1.11) | *5.62 |
| | | *Standard 14* | | |
| Know | Assess. learning & lang. | 2.58 (1.11) | 3.58 (.84) | *6.25 |
| Use | abil. of EDS | 2.08 (.95) | 3.21 (.87) | *6.10 |
| Know | Inst. strat. for EDS | 3.00 (.97) | 3.60 (.87) | *3.92 |
| Use | | 2.81 (1/14) | 3.46 (1.03) | *4.08 |
| Know | Plan & deliv. inst. for EDS | 3.42 | 3.84 | not sig. |
| Use | | 3.18 | 3.68 | not sig. |
| Know | Social integration for EDS | 3.10 (1.06) | 3.66 (.89) | *3.30 |
| Use | | 2.82 (1.2) | 3.53 (.95) | *3.85 |

*$p < .003$

Next each of the individual standard elements measured by the survey was examined. We calculated descriptive statistics for the mean knowledge and use reported by faculty within these elements. These descriptive statistics are provided in Table 3. Once again a series of t-tests were performed to compare the pre-post standard scores, using the Bonferroni correction. Statistically significant changes are indicated by an asterisk in Table 3.

The elements were then organized into four categories developed around common areas the standards address. The four categories were: Instructional strategies and practices (elements 3, 4, 9, 11, 12); Assessing students (elements 5, 10); Legal and ethical issues (elements 1, 7), and cultural background/social integration (6, 13). We calculated descriptive statistics for the mean knowledge and use reported by faculty within these categories. Once again a series of t-tests were performed to compare the pre-post standard scores, using the Bonferroni correction. There was a statistical significant mean increase in knowledge and use within each category. Table 4 shows the pre and post mean scores and standard deviations for each standard split by Knowledge and Use, and the t-values for the pre-post comparisons.

Both before and after the program faculty reported more knowledge about social integration and legal/ethical issues than about instructional strategies and assessment. The lowest mean score for pre knowledge was in the assessment category. On average faculty reported a moderate level of knowledge in the instructional practices and assessment categories. They reported a moderately high level of knowledge in the social integration and legal/ethical issues categories. The lowest mean score for

Table 4. Pre-Post Category Analysis Scores Split by Knowledge and Use.

| | | Category 1 | | | Category 2 | | |
|---|---|---|---|---|---|---|---|
| | | Pre (SD) | Post (SD) | t | Pre (SD) | Post (SD) | t |
| Know | N=38 | 3.20 (0.79) | 3.80 (0.60) | *5.98 | 2.68 (1.00) | 3.54 (0.81) | *5.70 |
| Use | N=38 | 2.95 (0.85) | 3.63 (0.60) | *4.70 | 2.12 (0.90) | 3.15 (0.81) | *5.95 |
| | | Category 3 | | | Category 4 | | |
| | | Pre (SD) | Post (SD) | t | Pre (SD) | Post (SD) | t |
| Know | N=38 | 3.60 (0.85) | 4.00 (0.70) | *3.70 | 2.82 (1.01) | 3.69 (0.82) | *7.69 |
| Use | N=38 | 3.34 (0.92) | 3.91 (0.61) | *4.16 | 2.47 (1.11) | 3.20 (0.81) | *6.47 |

*p<.003

pre use was also in the assessment category. On average faculty reported only some use of the components in both the assessment and legal/ethical issues categories. They reported moderate use of components in the instructional strategies and social integration categories. The post program data show that on average participants reported a moderately high knowledge (4 on the survey) in all areas. Post data also show that participants reported a moderate use (3 on the survey) of components in both the assessment and legal/ethical issues categories, and a moderately high use of components in the instructional strategies and social integration categories

Finally, we organized the pre and post knowledge and use data by faculty experience (tenured or tenure-track faculty). Means for knowledge and use scores were calculated and compared across these factors. Table 5 provides the pre-post mean values for Knowledge and Use split by faculty experience.

## Discussion and Implications

The limitations inherent in any study utilizing self-report data must be acknowledged and considered as a backdrop to the discussion of what we believe we learned from our investigation. Furthermore, the relatively small sample size makes it impossible to generalize beyond those who participated as subjects in this research. Nonetheless, we do believe that the data support our belief that the content of the faculty professional development program was effective in improving both the knowledge and use of the relevant elements of standards 9, 13 and 14 for tenured, tenure-track and temporary faculty. Faculty members in all three groups believe they gained a deeper understanding of these topics and began to incorporate them into their work with credential candidates. Therefore, all three groups of faculty appear to be better prepared to meet the needs of candidates who will be working with CLD and special populations.

One important component of successful professional development is that participants feel ownership of the program (Little, 1993; Sparks & Hirsch, 1997). We believe that faculty ownership is one factor that contributed to the success of this effort. Because the professional development plan emerged from the new elementary and secondary programs faculty had collaboratively designed, its focus reflects issues and topics they value. In addition, because the professional development activities became a vehicle for planning the implementation of the new teacher preparation programs, it was central to the immediate work of faculty in our department and, therefore, meaningful. It was both grounded in the participants' questions, inquiry, and experimentation, and connected to their work.

This truly was a professional development program designed by faculty for faculty. An ad hoc committee consisting of four faculty members with various areas of expertise planned the program. In addition, other faculty members were selected from each content group and program group to provide input on the various aspects of the professional development and the specific needs of the group they

Table 5. Pre-Post Mean Scores within Each Category Split by Knowledge/Use and Faculty Experience.

| | Category 1 | | | | Category 2 | | | |
|---|---|---|---|---|---|---|---|---|
| | Know | | Use | | Know | | Use | |
| | Pre | Post | Pre | Post | Pre | Post | Pre | Post |
| Tenure | 3.58 | 3.78 | 3.18 | 3.58 | 2.94 | 3.94 | 2.56 | 3.69 |
| T Track | 3.34 | 4.14 | 3.02 | 3.88 | 3.10 | 3.85 | 2.10 | 3.20 |
| Temp | 2.97 | 3.60 | 2.82 | 3.52 | 2.37 | 3.21 | 2.03 | 2.90 |
| | Category 3 | | | | Category 4 | | | |
| | Know | | Use | | Know | | Use | |
| | Pre | Post | Pre | Post | Pre | Post | Pre | Post |
| Tenure | 3.00 | 3.69 | 2.63 | 3.25 | 3.88 | 4.25 | 3.63 | 4.00 |
| T Track | 3.15 | 4.25 | 2.70 | 3.60 | 3.80 | 4.40 | 3.45 | 4.15 |
| Temp | 3.58 | 3.39 | 2.29 | 2.97 | 3.32 | 3.71 | 3.16 | 3.74 |

represented, to participate in the delivery of the sessions, and to act as a resource for others in the department.

Another factor that we believe contributed to its success was the way in which the program was scheduled. The planning committee realized the challenge involved in scheduling the sessions at times when such a large group of faculty could attend. Thus, as we described earlier, the sessions were scheduled during times reserved for department retreats, department meetings, and elementary and secondary program group meetings. The department chair and the faculty agreed that the sessions should take place at those times and that attendance would be mandatory, which reflects the commitment that all participants brought to the program.

In planning the sessions the committee also decided that we should have day-long sessions at the beginning and at the end of the program with a series of two hour sessions in between. The first day served to bring faculty together in team building activities. The last day allowed time to tie all the pieces of the program together, and plan for the individual and small group support activities that occurred during the next year.

A third factor contributing to the program's success was the way in which it was delivered. The face-to-face sessions allowed time for faculty to come together and work on tasks related to the content. Faculty could ask questions related to the presentations and discuss how the focus topics for that day were derived from and could connect to the work they do with candidates. The face-to-face sessions allowed the focus of the program to be supported by modeling, coaching, and problem

solving. The online component offered faculty access to resources, the opportunity to discuss issues between sessions, and ongoing access to the presentations from each session. Faculty members were encouraged to provide additional resources for inclusion on this web site. Both the face-to-face and online components fostered collaboration and a sharing of knowledge among participants.

The final factor contributing to the success of the professional development effort was the support that various stakeholders in the credential program provided. Administrative support and leadership at the department and college levels were instrumental in developing a sense of purpose, maintaining a spirit of unity, and achieving the program goals. Faculty and administrators from others departments within and outside the college of education also provided critical support. Their willingness and ability to put aside past turf issues and work collaboratively with teacher education faculty were pivotal in the program's success. The final set of stakeholders to contribute was our K-12 partners from school, district and county offices throughout our service region. They were involved in program planning and delivery, and helped ensure that the program never lost sight of SB2042's ultimate goal: improving student achievement in K-12 settings.

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## Appendix A
### *Knowledge/Use Survey*

The five-point *Knowledge Scale* should be interpreted as follows:

| | |
|---|---|
| 1 Low knowledge: | I know very little about this topic |
| 2 Some knowledge: | I know something, but not much about this topic. |
| 3 Moderate knowledge: | I know something about this topic but I could learn more. |
| 4 Good knowledge: | I feel I know more than the average teacher education about this topic. |
| 5 High knowledge: | I know a great deal about this topic. |

The five-point *Use Scale* should be interpreted as follows: In my role as an administrator,

| | |
|---|---|
| 1 Low use: | I almost never use this component. |
| 2 Some use: | I occasionally use this component. |

3 Moderate Use: I sometimes use this component.
4 Moderately High Use: I use this component more than the average teacher education.
5 High Use: I use this component very frequently.

| Instructional Component | Scale | Rating | | | | |
|---|---|---|---|---|---|---|
| 1. Knowledge of relevant state and federal laws related to English language learners and special populations. | Knowledge Scale | 1 low | 2 | 3 | 4 | 5 high |
| | Use Scale | 1 low | 2 | 3 | 4 | 5 high |
| 2. Knowledge of linguistic development, first and second language acquisition, and how first language literacy connects to second language development. | Knowledge Scale | 1 low | 2 | 3 | 4 | 5 high |
| | Use Scale | 1 low | 2 | 3 | 4 | 5 high |
| 3. Knowledge of instructional practices that promote English language development. | Knowledge Scale | 1 low | 2 | 3 | 4 | 5 high |
| | Use Scale | 1 low | 2 | 3 | 4 | 5 high |
| 4. Knowledge of systemic instructional practices designed to make grade appropriate or advanced curriculum content comprehensible to English learners. | Knowledge Scale | 1 low | 2 | 3 | 4 | 5 high |
| | Use Scale | 1 low | 2 | 3 | 4 | 5 high |
| 5. Knowledge of how to interpret assessments of English learners. | Knowledge Scale | 1 low | 2 | 3 | 4 | 5 high |
| | Use Scale | 1 low | 2 | 3 | 4 | 5 high |
| 6. Knowledge of the importance of students' family and cultural backgrounds and experiences. | Knowledge Scale | 1 low | 2 | 3 | 4 | 5 high |
| | Use Scale | 1 low | 2 | 3 | 4 | 5 high |
| 7. Knowledge of legal and ethical issues concerned with the use of technology. | Knowledge Scale | 1 low | 2 | 3 | 4 | 5 high |
| | Use Scale | 1 low | 2 | 3 | 4 | 5 high |
| 8. Knowledge of appropriate use of computer-based technology for information collection and analysis. | Knowledge Scale | 1 low | 2 | 3 | 4 | 5 high |
| | Use Scale | 1 low | 2 | 3 | 4 | 5 high |

| Instructional Component | Scale | Rating | | | | |
|---|---|---|---|---|---|---|
| 9. Knowledge of how to select and evaluate a wide array of technologies for effective use in relation to the state-adopted academic curriculum. | Knowledge Scale | 1 low | 2 | 3 | 4 | 5 high |
| | Use Scale | 1 low | 2 | 3 | 4 | 5 high |
| 10. Knowledge and skills in assessing the learning and language abilities of special population students in order to identify students for referral to special education. | Knowledge Scale | 1 low | 2 | 3 | 4 | 5 high |
| | Use Scale | 1 low | 2 | 3 | 4 | 5 high |
| 11. Knowledge of appropriate instructional materials and technologies, including assistive technologies, and differentiated teaching strategies to meet the needs of special populations in the general education classroom. | Knowledge Scale | 1 low | 2 | 3 | 4 | 5 high |
| | Use Scale | 1 low | 2 | 3 | 4 | 5 high |
| 12. Knowledge of how to plan and deliver instruction to those identified as students with special needs and/or those who are gifted and talented that will provide these students access to the core curriculum. | Knowledge Scale | 1 low | 2 | 3 | 4 | 5 high |
| | Use Scale | 1 low | 2 | 3 | 4 | 5 high |
| 13. Knowledge of when and how to address the issues of social integration for students with special needs who are included in the general education classroom. | Knowledge Scale | 1 low | 2 | 3 | 4 | 5 high |
| | Use Scale | 1 low | 2 | 3 | 4 | 5 high |